

Remarks

Claims 37-55 are presented for reconsideration, with claims 37, 54, and 55 being the independent claims.

Based on the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding rejections and that they be withdrawn.

Rejection under 35 U.S.C. § 112, first paragraph

The Examiner rejected claims 37-55 under 35 U.S.C. §112, first paragraph, on the basis that “independent claims 37, 54, and 55 ... [contain] the phrase ‘two dimensional array’ which was not described in the specification or drawings in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.” Applicants traverse the rejection.

Individual actuators forming “a two dimensional array” and/or “a two dimensional array” of mirrors is clearly supported in the application as originally filed.

Pursuant to M.P.E.P § 2163, e.g., §2163(III)(A), the Examiner has failed to establish a *prima facie* case under 35 U.S.C. §112, first paragraph, that the instant specification does not include adequate written description to support the claimed features. This is because the Examiner has failed to meet the initial burden of rebutting the presumption that the written description is adequate by presenting, by a preponderance of evidence, why a person skilled in the art would not recognize in the Applicants’ disclosure a description of the invention defined by the claims. See, e.g., *In re Wertheim*, 541 F.2d 257, 263, 191 U.S.P.Q. (BNA) 90, 97 (CCPA 1976). For example, the Examiner has not, in rejecting the claims, set forth express findings of fact regarding his analysis that supports the lack of written description conclusion.

As the Examiner well knows, the Statute at 35 U.S.C. §112, first paragraph, “ensures that, as of the filing date, the inventor conveyed with reasonable clarity to those of skill in the art that he was in possession of the subject matter of the claims.” *Vas-Cath*

Inc. v. Mahurkar, 935 F.2d 1555, 1563-64, 19 U.S.P.Q.2D (BNA) 1111, 1117 (Fed. Cir. 1991). “The Patent Act and [the Federal Circuit] case law require only sufficient description to show one of skill in the ... art that the inventor possessed the claimed invention at the time of filing.” *Union Oil Co. v. Atl. Richfield Co.*, 208 F.3d 989, 997, 54 U.S.P.Q.2D (BNA) 1227 (Fed. Cir. 2000).

In regards to possession, the Examiner well knows the written description requirement does not require the Applicants “to describe exactly the subject matter claimed, [instead] the description must clearly allow persons of ordinary skill in the art to recognize that [he or she] invented what is claimed.” *In re Gosteli*, 872 F.2d 1008, 1012, 10 U.S.P.Q.2D (BNA) 1614, 1618 (Fed. Cir. 1989) (citations omitted). Possession may be shown by a clear depiction of the invention in detailed drawings or in structural chemical formulas that permit a person skilled in the art to clearly recognize that Applicants had possession of the claimed invention. Also, an adequate written description of the invention showing the inventor had possession of the invention, may be shown by any description of sufficient, relevant, identifying characteristics so long as a person skilled in the art would recognize that the inventor had possession of the claimed invention. See, e.g., *Purdue Pharma L.P. v. Faulding Inc.*, 230 F.3d 1320, 1323, 56 USPQ2d 1481, 1483 (Fed. Cir. 2000).

With respect to claim language being exactly described in the written description, it is well understood that “[the Applicants] does not have to describe exactly the subject matter claimed.” *In re Hayes Microcomputer Prods., Inc.*, 982 F.2d 1527, 1533, 25 U.S.P.Q.2D (BNA) 1241, 1245. Rather, “the primary consideration is factual and depends on the nature of the invention and the amount of knowledge imparted to those skilled in the art by the disclosure.” *In re Wertheim*, 541 F.2d at 262, 191 U.S.P.Q. at 96.

The instant and originally filed specification clearly supports, for example at paragraphs 0002, 0003, 0016, 0017, 0018, 0022, and 0026 reproduced below, pursuant to the case law above, individual actuators forming “a two dimensional array” and “a two dimensional array” of mirrors, respectively, as recited in claims 37, 54, and 55. The art is highly predictable. Thus, the disclosure in the instant specification of “a spatial light modulator” conveyed with reasonable clarity and was a sufficient, relevant, and

identifying characteristic to those of skill in the art that at least one of the embodiments being described in the instant specification included “a two dimensional array.”

A skilled artisan would clearly know that a conventional spatial light modulator includes a “two dimensional array” of mirrors (although Applicants assert the combination of features recited in the claims are novel). This is because in order to form a device on a substrate, a two dimensional light pattern is formed by the spatial light modulator. Also, the instant specification teaches, for example, the spatial light modulator is being used to replace a reticle. It is well known to a skilled artisan that a reticle includes a two dimensional pattern. Thus, for at least these reasons, those of skill in the art could easily deduce from the specification that the inventors were describing (i.e., had possession of) individual actuators forming “a two dimensional array” and/or “a two dimensional array” of mirrors.

For example, exemplary portions of the instant specification teach the following:

A spatial light modulator (SLM) (e.g., a digital micro mirror device (DMD), a liquid crystal display (LCD), or the like) typically includes an array of active areas (e.g., mirrors or transmissive areas) that are controlled to be either ON or OFF to form a desired pattern. A predetermined and previously stored algorithm based on a desired exposure pattern is used to turn ON and OFF the active areas.

(Paragraph 0002).

Conventional reflective SLMs use mirrors (e.g., reflective elements, pixels, etc.) as the active areas. The mirrors are controlled using electrical circuits that cause resilient devices (e.g., leverage arms) to tilt or move the mirrors. For example, electrostatic tilting mirrors can be used. The tilting or moving cause light transmitted towards the mirrors to be reflected towards or away from a target. SLMs have included increasingly smaller mirrors in recent years to comply with the increasing resolution required of them. However, further decrease in the size of the mirrors is limited based on the current manufacturing technology and materials used. For example, current mirrors can be as small as about 16 microns in width or diameter. Example environments using an SLM can be photolithography,

maskless photolithography, biotechnology, projection televisions, and the like.

(Paragraph [0003]).

In one example environment, the SLM can be used in place of a reticle in maskless photolithography to project patterns onto a substrate. In another example, the SLM can be used in a projection optical system of a photolithographic tool, if the SLM is aspherical in shape, to correct for aberrations in a wavefront. In yet another example, the SLM can be used in biomedical and other biotechnology environments, as is known in the relative arts. In yet still another embodiment, the SLM can be used in projection televisions. In other examples, using the fine resolution accomplished through the integrated circuit actuators, the SLM can fix a sigma during pupil fill and can be part of a dynamically adjustable slit application to correct illumination uniformity. The are all exemplary environments, and are not meant to be limiting.

(Paragraph 0026).

Also, the specification goes on to describe the Figures as showing “a portion of an SLM,” not an entire SLM, in the following exemplary sections:

FIG. 1 shows a portion of an SLM according to embodiments of the present invention.

(Paragraph 0016).

FIG. 2 shows a portion of an SLM according to embodiments of the present invention.

(Paragraph 0017).

FIG. 3 shows a portion of an SLM according to embodiments of the present invention.

(Paragraph 0018).

FIG. 9 shows a portion of an SLM according to
embodiments of the present invention.
(Paragraph 0022).

Therefore, based on the case law discussed above, the exemplary portions of the instant specification clearly show the inventors were in possession of the claimed features, as would be understood to those of skill in the art. Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claims 37-55 and find them allowable.

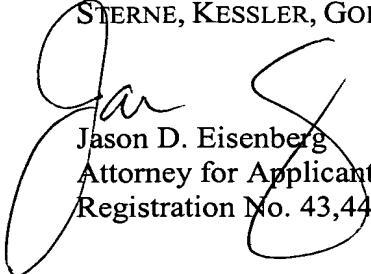
Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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